

PATENT SPECIFICATION

(11) 1261532

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DRAWINGS ATTACHED

- (21) Application No. 36324/71 (22) Filed 4 Jan. 1968
- (62) Divided out of No. 1261531
- (23) Complete Specification filed 30 Dec. 1968
- (45) Complete Specification published 26 Jan. 1972
- (51) International Classification A 47 j 41/00//A 47 g 19/23
- (52) Index at acceptance
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- (72) Inventor GWENDOLINE FLORA GATELEY



(54) DOUBLE WALLED DRINKING CUP

PATENTS ACT 1949

SPECIFICATION NO 1261532

In accordance with the Decision of the Principal Examiner, acting for the Comptroller-General, dated 25 August 1972 this Specification has been amended under Section 14 in the following manner:-

Page 1, line 30, Page 2, line 39, *after space delete full stop insert*, at least the outer having its bottom displaced upwards in a central region so that it makes contact with a surface it is standing on only in a region adjacent its circumferential edge.

THE PATENT OFFICE

17 October 1972

20 The double cup has its double wall formed by virtue of having an inner and an outer each of sheet material formed with a bottom and a side wall, the two side walls being spaced apart to leave an insulating region to prevent too easy transfer of heat from the inside to the outside of the cup or vice versa, the bottom of the side wall of the inner being in contact with the side wall of the outer to provide location between inner and outer laterally of the cup axis, and the bottom of the inner being spaced from the bottom of the outer in a region near the bottoms of the side walls to provide an insulating space.

25 Reference may be made to our co-pending Application No. 693/68 (Serial No. 1261531) from which this application has been divided which describes and claims a double walled cup having its double wall formed by virtue of having an inner and an outer each of sheet material formed with a bottom and side wall, the two side walls being spaced apart to leave an insulating region to prevent too easy transfer of heat from the inside the outside of the cup or vice versa, and the two bottoms being in contact with one another over a major part of their area.

40 Reference may also be made to Application No. 36325/71 (Serial No. 1261533) which has also been divided from Application No. 693/68 Serial No. 1261531. This application

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which:—

Figure 1 shows in section a double walled drinking cup and the lower part of a nested cup;

Figures 2, 3 and 4 show details of alternative cups.

70 The cup shown in Figure 1 is a double walled cup having an outer 11 and an inner 12 each formed from high impact sheet polystyrene by vacuum deep drawing. The outer has a slightly outwardly turned flange 13 at the top and the inner has a curled over rim 14 which engages under the flange 13 to hold the parts together, and leave an air space 15 between the side walls.

80 The inner has an inward horizontal shoulder 18, below the shoulder the inner extends downwardly and outwardly as shown at 25 to join a portion 26 in contact with the lower part of the side wall 36 of the outer. The outer extends inwardly and downwardly as shown at 35 to join the portion 36. There is an insulating air space 39 between the bottoms 37 and 38 on either side of an upwardly inclined side of a protruberance in the base where the two bottoms engage.

90 It can be seen that the bottom of the side wall 26 of the inner is in contact with the side wall 36 of the outer.

It can also be seen that the nesting cup rests in the lower cup by virtue of the bottom

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(54) DOUBLE WALLED DRINKING CUP

- (71) We, MONO CONTAINERS LIMITED, a Company registered under the laws of Great Britain, of Malt House, Field End Road, Eastcote, Ruislip, Middlesex, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed to be particularly described in and by the following statement:—
- 10 This invention relates to double walled drinking cups formed from sheet plastics material. Frequently the material will be high impact sheet polystyrene and normally the cups will be deep drawn by a vacuum method from heated sheet material.
- 15 According to the present invention a double walled cup has its double wall formed by virtue of having an inner and an outer each of sheet material formed with a bottom and a side wall, the two side walls being spaced apart to leave an insulating region to prevent too easy transfer of heat from the inside to the outside of the cup or vice versa, the bottom of the side wall of the inner being in contact with the side wall of the outer to provide location between inner and outer laterally of the cup axis, and the bottom of the inner being spaced from the bottom of the outer in a region near the bottoms of the side walls to provide an insulating space.
- 20 Reference may be made to our co-pending Application No. 693/68 (Serial No. 1261531) from which this application has been divided which describes and claims a double walled cup having its double wall formed by virtue of having an inner and an outer each of sheet material formed with a bottom and side wall, the two side walls being spaced apart to leave an insulating region to prevent too easy transfer of heat from the inside the outside of the cup or vice versa, and the two bottoms being in contact with one another over a major part of their area.
- 25 Reference may also be made to Application No. 36325/71 (Serial No. 1261533) which has also been divided from Application No. 693/68 Serial No. 1261531. This application describes and claims a double walled cup having its double wall formed by virtue of having an inner and an outer each of sheet material formed with a bottom and a side wall, the two side walls being spaced apart to leave an insulating region to prevent too easy transfer of heat from the inside to the outside of the cup or vice versa, the two bottoms being spaced from one another in a region adjacent the bottom of the side walls and the two bottoms being in contact at their centres.
- 30 The invention may be carried into practice in various ways and four embodiments will now be described by way of example with reference to the accompanying drawings, of which:—
- 35 Figure 1 shows in section a double walled drinking cup and the lower part of a nested cup;
- 40 Figures 2, 3 and 4 show details of alternative cups.
- 45 The cup shown in Figure 1 is a double walled cup having an outer 11 and an inner 12 each formed from high impact sheet polystyrene by vacuum deep drawing. The outer has a slightly outwardly turned flange 13 at the top and the inner has a curled over rim 14 which engages under the flange 13 to hold the parts together, and leave an air space 15 between the side walls.
- 50 The inner has an inward horizontal shoulder 18, below the shoulder the inner extends downwardly and outwardly as shown at 25 to join a portion 26 in contact with the lower part of the side wall 36 of the outer. The outer extends inwardly and downwardly as shown at 35 to join the portion 26. There is an insulating air space 39 between the bottoms 37 and 38 on either side of an upwardly inclined side of a protruberance in the base where the two bottoms engage.
- 55 It can be seen that the bottom of the side wall 26 of the inner is in contact with the side wall 36 of the outer.
- 60 It can also be seen that the nesting cup rests in the lower cup by virtue of the bottom

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37' being seated on the shoulder 18 of the inner of a lower cup.

Figure 2 shows a cup similar to that shown in Figure 1. There is an insulating air space 51 between the inner and outer at the edges of the bottom but they are in contact at the centre of the bottom. The inner and the outer are in contact over the lower part of the side walls, and in particular the bottom of the side wall of the inner is in contact with the side wall of the outer. The inner 12 is formed with a nesting shoulder 52 on which another cup can nest.

Figures 3 and 4 show similar cups; the inner 12 is in contact with the outer 11 at the centre of their bottoms and the inner is in contact with the outer around its lower edge. The bottom corner of a nesting cup can rest on the shoulders formed on the inner of a lower cup.

In all the cup, the contact between inner and outer at the bottoms of the side walls provides lateral location between them.

WHAT WE CLAIM IS:—

1. A double-walled cup having its double wall formed by virtue of having an inner and an outer each of sheet material formed with a bottom and a side wall, the two side walls being spaced apart to leave an insulating region to prevent too easy transfer of heat from the inside to the outside of the cup or vice versa, the bottom of the side wall of the inner being in contact with the side wall of the outer to provide location between inner

and outer laterally of the cup axis, and the bottom of the inner being spaced from the bottom of the outer in a region near the bottoms of the side walls to provide an insulating space.

2. A cup as claimed in Claim 1 in which the contact between the bottom of the side wall of the inner and the outer is in line or area contact.

3. A cup as claimed in Claim 1 or Claim 2 in which the inner has an inwardly directed shoulder for supporting the bottom of the outer of a similar cup nested within the said cup.

4. A cup as claimed in Claim 3 in which the shoulder is formed at the top of an inwardly and upwardly directed portion of the side wall of the inner.

5. A cup as claimed in any of the preceding claims in which the bottom of the inner and the bottom of the outer are in contact at their centres.

6. A cup as claimed in any of Claims 1 to 4 in which the bottom of the inner and the bottom of the outer are in contact over an annulus concentric with the bottoms, thus providing an additional insulating space at the centre of the bottoms.

7. A cup substantially as described herein with reference to any one of the accompanying drawings.

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